School Teachers' Knowledge about Autism in Saudi Arabia

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Abstract

The purpose of this study was to find out what school teachers know about Autism. In addition, this study attempted to find out if there any significant differences in school teachers' knowledge about Autism depending on teachers' (gender, position, education level, teaching experience, and contact with students with Autism) variables. A total of 391 general and special education teachers from various segregated and inclusive schools within the Jeddah in Saudi Arabia completed study instrument (*Autism knowledge Questionnaire*) to determine their level of knowledge about Autism. An analysis of the collected data, using descriptive statistics and analysis of variance, indicated that school teachers had an acceptable approaching to weak level of knowledge about Autism disorder. The results also indicated significant differences in the teachers' knowledge about Autism depending on teachers' (position, education level, teaching experience, and contact with students with Autism) favoring special education teachers, more advanced level of education and teaching experience, and those with previous contact with students with Autism.

Keywords: *school teachers; knowledge; autism*

1. Introduction and Literature Review

Autism is a pervasive developmental disorder, characterized by communication deficits, social interaction impairments, and restricted or repetitive behaviors and interests ([DSM-IV-TR]; American Psychiatric Association, 2000). Symptom of the Autism is highly heterogeneous and can range from severe impairment to mild delay (Mesibov & Shea, 1996). Autism now affects a significant number of students in schools. It is well documented that the unique learning characteristics of these students differ widely from other learners, requiring teachers to possess specialized skills (Simpson, 2005a). Despite advancements in instructional practices for students with Autism, little attention has been given to examining the qualities of special and general education teachers who deliver services to these students in inclusive sittings (Jordan, 2005).

Between 1995 and 2008, the number of American school children receiving special education services for Autism rose from 22,000 to over 140,000 (Fredericks, 2008). The rise in reported numbers of students with Autism in public schools, poor educational outcomes, increased litigation, and an expansion of knowledge of educational practices effective with this population has led to a sense of urgency among educators and parents to ensure students are provided an appropriate education. These data present a challenge to school teachers to become better prepared to serve children with Autism, both instructionally and socially. Additionally, increasing legislative demands placing an emphasis on teacher qualities raise questions about teachers who serve students with Autism. As a result, it has become increasingly necessary to ensure school teachers are adequately prepared and possess requisite knowledge and skills.To meet the needs of the growing number of students with Autism and to take the necessary action to assist them, school teachers must become aware of Autism. Awareness of Autism is the first step in supporting and serving students with Autism. Teachers need to learn about the nature of Autism and about the needs of children with Autism. School teachers, have the capacity to change practice within the school and to affect the instruction of students with Autism. The knowledge held by the teachers is information that can create change, either by creating grounds for action or by making an individual (or institution) capable of different or more effective action (Drucker, 1989).

Because of the increasing prevalence of Autism, every public school teacher is likely to serve students with Autism. However, many teachers lack sufficient awareness, knowledge, and understanding of Autism to meet the needs of

these students in the public schools. Little is known about what factors are associated with awareness, knowledge, and understanding of Autism among school teachers (Schwartz & Drager, 2008).

Based on an examination of the literature, little research has evaluated qualities of teachers who serve students with Autism. It is well documented that the learning characteristics of these individuals differ widely from other learners requiring teachers to possess specialized skills (Simpson, 2005b). Research is needed to determine whether teachers possess knowledge of educational practices critical for the improvement of students with Autism, whether they implement these practices into the classroom, as well as training needs of these teachers.

Some efforts have been made to assess the knowledge base of teachers and other educational professionals about Autism. For example, Stone and Rosenbaum (1988) found that teachers held incorrect beliefs about students with Autism, particularly in the area of cognition, when compared to Autism specialists. Other studies have shown that speech-language pathologists demonstrated inadequate knowledge of strategies for inclusion (Cascella & Colella, 2004). Furthermore, despite demonstration of accurate knowledge about Autism, medical professionals have been shown to make recommendations inconsistent with their knowledge (Kennedy, Regehr, Rosenfield, Roberts & Lingard, 2004).

A study comparing special education teachers to general education teachers found pronounced differences between the two groups (Buell, Hallam, Gamel-McCormick & Scheer, 1999). For example, general education teachers expressed more need for inclusion training than special education teachers. Moreover, special education teachers expressed greater confidence in performing inclusion related tasks such as adapting curricula, participating in IEP meetings, and writing behavioral objectives.

A dissertation by (Hendricks, 2007) evaluated special education teachers' knowledge and implementation of educational practices critical for the improvement of students with Autism and determined areas of training needs. A total of 498 special education teachers were surveyed, Participants reported a low to intermediate level of knowledge as well as implementation of practices. The most frequently reported was a need for training in social skills development, and the least frequently reported was training in individualization and support strategies. Relationships between the level of knowledge, implementation, and training needs and teachers' occupational characteristics were explored. Numerous occupational characteristics were found to have a relationship with level of knowledge and implementation, including area of endorsement, educational level, educational setting, number of students with Autism taught, and student learning characteristics.

It is now widely believed that teacher qualities have a significant impact on student achievement (Darling-Hammond & Youngs, 2002). The plan embodied in the No Child Left Behind Act of 2001 (NCLB) and the Individuals with Disabilities Improvement Act (IDEA, 2004) recognized the importance of teacher quality, and as a result, set the goal that all students are taught by a "highly qualified teacher" (HQT).In a more recent study conducted by the Center on Personnel Studies in Special Education (COPSSE), Brownell, Ross, Colon and McCallum (2003) analyzed special education teacher preparation programs. They concluded special education teachers require instruction in both subject matter knowledge as well as instructional pedagogy.

Recently, a number of studies have evaluated the knowledge, practices, and training needs of professionals who work with individuals with Autism. Cascella & Colella (2004) investigated the knowledge of Autism spectrum disorders among speech language pathologists. Eighty-two speech-language pathologists working in schools in Connecticut were surveyed. Knowledge was assessed by asking questions about behavioral characteristics, communication characteristics, related education and intervention strategies, assessment formats, and inclusion strategies. Participants reported the most knowledge in behavioral and communication characteristics associated with Autism spectrum disorders, and the least knowledge in education and intervention strategies.

Stahmer, Collings and Palinkas (2005) examined the knowledge and practices of early intervention service providers. Twenty-two early intervention specialists who worked with children with Autism under the age of five participated in focus groups. Providers reported using mostly non-evidence based techniques. Of the 30 interventions listed, only one third were evidence based. Participants reported wanting to use only those methods shown to be effective, but few had analyzed the literature on the techniques used. All providers reported concerns about adequate training and desired further information on interventions that are effective with children with Autism.

Stone and Rosenbaum (1988) examined teachers' knowledge and beliefs about Autism and found teachers had many misconceptions about the disorder. Experience with students with Autism ranged from 1-19 years. Teachers held multiple certifications, with emotional disturbance and mental retardation being the most common.

Whaley (2002) completed a dissertation surveying special education teachers who work with students with Autism in

Tennessee. The knowledge of etiology and educational programming, the types of teaching methodologies implemented, and the training needs of teachers were evaluated. A total of 292 special education teachers working in 11 school districts in Tennessee completed surveys. On the knowledge portion of the survey, special educators were asked true false questions about etiology and educational programming. In etiology, teachers had a mean score of 73% correct. In educational programming, teachers received a mean score of 79%. However, there were some similar misconceptions. Teachers inappropriately viewed Autism as an emotional disorder, despite evidence that it is neurobiological in nature. Assessment of training needs of special education teachers indicated most (77%) wanted further training in strategies to support students with Autism. Results of this study indicated special education teachers lack an understanding of the research base regarding Autism. Most teachers desired more training in this area. However, teachers may benefit from training that will provide not only information on efficacious teaching strategies, but also provide information on evaluating research and determining treatment effectiveness.

According to (U.S. Department of Education, 2001), over 20% of children with Autism spend most of their time in a regular education classroom. Given this rise in the mainstreaming of children with Autism, a successful teaching for this population needs for better understanding the general educators' variables affecting it (Swaim & Morgan, 2001). Precisely, there is a shortage of literature that examines general educators' knowledge, self-efficacy, and concerns in teaching students with Autism in comparison to special educators. Additionally, little attention in assessing teacher knowledge of the characteristics of the disorder has been noted (Jennett, Harris & Mesibov, 2003).

Direct experience in dealing with students with special needs is a critical factor in general educators' efficacy of teaching such a population and with their ability to include such students in their class (Giangreco, Dennis, Cloniger, Edelman & Schattman, 1993). Specially, research indicates that general educators who teach children with disabilities do not have the capabilities necessary to meet the needs of these special learners (Campbell- Whatley, Obiakor & Algozzine, 1995).

A sample of 72 educators was assessed regarding knowledge of Autism characteristics, beliefs about etiology, effective teaching practices, and teacher training needs (Helps, Newsom-Davis & Callias, 1999). Findings revealed that teachers in mainstream schools had generally poorer knowledge of Autism and had less training than the special educators group. Teachers of both groups harbored misconceptions about the disorder including the trend not to view children with Autism as having learning difficulties (Helps et al., 1999).

Mavroupoulou and Padeliadu (2000) conducted one of the few studies that examined general educators' (n=35) and special educators'(n=29) general knowledge of the Autism disorder and views of the instructional goals for these children. Both groups of teachers rated several problematic features of Autism (i.e., sleep, eating problems) as the least significant features of Autism. Additionally, a significant number of teachers in both groups felt that psychotherapy is an effective form of treatment for the Autism disorder. In general, special educators in this study reported more thorough knowledge of Autism and promoted instruction in all major deficit areas.

Seagal (2008) proposed the Autism Inclusion Questionnaire, to assess the constructs of experience, knowledge, attitudes towards inclusion, and classroom practices as they relate to Autism. Results indicated that education professionals (N = 47) reported generally positive attitudes; however, educators demonstrated important misconceptions and lack of knowledge regarding Autism. Further, a significant relationship was found between knowledge of Autism and awareness of potential classroom strategies for inclusion, whereas attitudes and awareness of strategies were unrelated.

Schwarber (2006) also examined teachers' knowledge of symptoms, concerns, and self-efficacy in teaching children with Autism. The sample of 166 preschool general education teachers (n=105), special education teachers (n=29), and other educational professionals (i.e., occupational therapists, and speech pathologists) attending an in-service from eleven elementary schools were selected from four school districts in the Midwest. Results indicated that there was confusion regarding Autism knowledge amongst all educators. Special educators had more knowledge, higher self-efficacy, and less concern in teaching children with Autism than general education teachers.

In summary, recent research suggests that general educators found themselves ineffectively prepared to teach children with disabilities (Sprague & Pennell, 2000). Additionally, general educators receive limited preparation to meet the academic needs of students with disabilities, and few believed that they have sufficient time, skills, training, or resources necessary for successful inclusion. Given the increase in children being diagnosed with Autism and included in regular education classrooms (U.S. Department of Education, 2001) and the link between teacher self-efficacy, knowledge, and effective teaching (Brownell & Pajares, 1999), more research is necessary to determine the relationship between knowledge/skill level and self-efficacy in teaching children with severe disabilities.

1.1 Statement of the Problem

Autism now affects a significant number of students in schools, and this will set a challenge to school teachers to become better prepared to serve children with Autism. To meet the needs of the growing number of students with Autism and to take the necessary action to assist them, school teachers must become aware of Autism. Increasing research and literature shows that educators lack skills and knowledge of Autism and how students with Autism learn.

1.2 Purpose of the Study

The purpose of the study was to find out what school teachers know about Autism. Educators' knowledge or lack of knowledge of Autism could greatly affect the students and the tools to provide an appropriate education for students with Autism. In addition, this study attempted to find out if there any significant differences in school teachers' knowledge about Autism depending on the variables; teacher gender (female or male), teacher position (special or general education), teacher education level (bachelor's degree and below or master's degree and above), teaching experience (less than 5 years, 5–10 years, more than 11 years), and contact with students with Autism variables. Based on the reviewed literature, there are several research questions regarding teachers' knowledge about Autism. Specifically, this study aimed to answer the following questions:

1. What level of knowledge do school teachers possess about Autism?
2. Are there any significant differences of teachers' knowledge about Autism based on their gender, position, education level, teaching experience, and contact with students with Autism variables?

2. Methods

2.1 Research Design

This study utilized a quantitative descriptive survey research design to determine special and general education teachers knowledge about Autism in both segregated and inclusive school sittings.

2.2 Population of Sample

Special and regular education teachers working in both segregated and inclusive schools in Jeddahdistrict which considered as one of the biggest cities in Saudi Arabia were invited to participate in this research study. Participating teachers were asked to completeThe *Autism knowledge Questionnaire* (AKQ) to determine their level of knowledge about Autism. The researcher contacted the appropriate school administrators in Jeddah to obtain permission to conduct this study. Initially, the questionnaires was administered to 410 general and special education teachers; 402 of the questionnaires were completed and returned, 11 of which were excluded for providing incomplete information. Thus, the final sample consisted of 391 general and special education teachers from various segregated and inclusive schools within the Jeddah in Saudi Arabia. The teachers were randomly selected from the study population. Table (1) provides the sample distribution according to the variables of the study: gender, position, education level, teaching experience, and contact with students with Autism.

Table 1: Distribution of the Study Sample According to the Variables of the Study

Variable		Number	Total
position	Special education	179	391
	General education	212	
Gender	Female	193	391
	Male	198	
Education Level	Bachelor or less	329	391
	Higher diploma	41	
	Master's	21	
Teaching Experience	Less than 5 years	130	391
	5–10 years	148	
	More than 10 years	113	
contact with students with Autism	Yes	207	
	no	184	391

2.3 Measures

The *Autism knowledge Questionnaire* (AKQ) was developed for the present study and contains two sections. The first section is the key demographic variables (gender, position, education level, teaching experience) and a question about previous contact or experiences with individuals with Autism. The second section, The *Autism knowledge Questionnaire* (AKQ), contains 30 items proposed to measure one's knowledge of Autism. The questionnaire mainly assess and measure knowledge of general information about the characteristics of students with Autism and how those students with this disorder function. Knowledge items were adapted from Stone (1987), Shah (2001), and Furnham & Buck (2003). The questions in this section were presented as True/False statements; however, a 'Don't Know' option was included and respondents were instructed to select this response rather than guess. The face validity of the current study questionnaire was verified by a group of professors (eight professors) trained in the field of special education that rated the clarity and appropriateness of the scale statements. Based on the group's observations and suggestions, necessary adjustments were made, and some phrases were reworded. After implementing the professors suggestions, their percentage of agreement reached 87%. On the other hand, the reliability for the internal consistency of the study instrument was measured by Cronbach Alpha with a value reached (0,926).

2.4 Data Collection Procedure

After contacting the appropriate school administrators of both segregated and inclusion schools to obtain permission to conduct this study, teachers were asked to completethe *Autism knowledge Questionnaire* (AKQ) to determine their level of knowledge about Autism. The Data collection for the study was conducted in the summer of 2013.

2.5 Data Analysis Procedure

To answer the research questions, the data were analyzed using descriptive statistics for categorical data (i.e., means, standard deviations). Data were numerically coded and transferred to the statistical package for social science (SPSS) pack 20. The *Autism knowledge Questionnaire* (AKQ)was divided into categories of True, False and Do Not Know. A true response was coded with a score of 1, a False response was coded with a score of 0, and a score of 0 was used for do not know. Teachers lake of knowledge was measured by the number of incorrect responses and don't know responses on the (AKQ). Responses of the study sample members were calculated by extracting the (percentage and mean) of the correct responses for each member of the sample on the *Autism knowledge Questionnaire* (AKQ). If the mean of correct responses of a particular sample member were above (0.7), their knowledge about Autism was considered 'Good'; If the mean ranged between (0.5 - 0.7), their knowledge about Autism was considered 'Acceptable'; and if the mean was below (0.5), their knowledge was considered 'Weak'. Higher mean scores indicated better knowledge about Autism, and lower mean scores indicated weaker knowledge about Autism.

And finally, to measure the relationship between several independent variables (gender, position, education level, teaching experience, and contact with students with Autism) and one dependent variable (teachers knowledge about Autism), a multivariate analysis (ANOVA) and Post hoc analysis (Scheffe) tests were used.

3. Results

The first research question pertaining to this study aimed to find out what school teachers know about Autism. Teachers, level of knowledge was measured by The *Autism knowledge Questionnaire* (AKQ). Table 2 shows numbers and percentages of the correct answers that both special and general school teachers have achieved on the (AKQ). Here we notice that all correct answers on the study tool ranged between (42.7% - 74.9%). Items (1, 4, 9, 13, 23, 26, and 29) were below (50%), and items (6, 7, 10, 12, 17, 19, 22, 24, and 27) were between (50% - 60%). This gives a hint around the lake of knowledge that school teachers had about Autism disorder.

Table 2: Mean, Std., Number, and Percentage of Correct Answers for Each Item of the Questionnaire for All Study Sample

		Correct answers			
Item N.	item	number	Percentage	Mean	Std.
1	Most children with Autism have an intellectual disability	190	48.6	.49	.500
2	Autism disorder is usually diagnosed during the first three years of the child's age	258	66.0	.66	.474
3	Children with Autism usually manifest special abilities like drawing and facts and figures remembering	274	70.1	.70	.459
4	Children must exhibit impaired social interaction and language communication to be diagnosed with Autism	192	49.1	.49	.501
5	Autism is a developmental disorder	236	60.4	.60	.490
6	With proper intervention, most children with Autism disorder will eventually "outgrow" the disorder	197	50.4	.50	.501
7	most autistic children do not talk	220	56.3	.56	.497
8	The majority of children with Autism are female	248	63.4	.63	.482
9	Children with Autism do not make any visual communication during conversation with others	189	48.3	.48	.500
10	Most children with Autism have a problem with imaginary playing	212	54.2	.54	.499
11	Some children with Autism have high or low sensitivity of visual, auditory, tactile, or olfactory stimuli	261	66.8	.67	.472
12	Autism disorder is diagnosed by medical methods	197	50.4	.50	.501
13	Behavioral patterns in children with Autism are similar	190	48.6	.49	.500
14	We can diagnose Autism disorder depending on physical features	243	62.1	.62	.486
15	Behavioral intervention is considered the most effective treatment method of Autism	293	74.9	.75	.434
16	In many cases, the cause of Autism disorder is unknown	244	62.4	.62	.485
17	Children with Autism tend to be auditory learners	214	54.7	.55	.498
18	Some children with Autism demonstrate inconsistency in motor skills	242	61.9	.62	.486
19	Poor parenting practices can cause Autism disorder	234	59.8	.60	.491
20	children with Autism behave better only in organized educational environments	268	68.5	.69	.465
21	If a particular method of treatment achieved effective results with some children with Autism, then it is necessarily effective with all children with Autism	239	61.1	.61	.488
22	Autism could be associated with Epilepsy	211	54.0	.54	.499
23	Autistic children prefer routine activities	179	45.8	.46	.499
24	Child with Autism appears like a deaf	231	59.1	.59	.492
25	Autism disorder can be diagnosed through behavioral observation	270	69.1	.69	.463
26	Medication can alleviate the core symptoms of Autism disorder	192	49.1	.49	.501
27	Genetic factors play an important role as a cause of Autism disorder	204	52.3	.52	.500
28	Children with Autism frequently repeat the talk they hear	243	62.1	.62	.486
29	Generally, children with Autism understand feelings and emotions of others.	167	42.7	.43	.495
30	Children with Autism demonstrate stereotypical behaviors like fluttering	268	68.5	.69	.465
	Total level of knowledge			.58	.275

Moreover, means and standard deviations for responses of school teachers on each item of the questionnaire and for the whole level of knowledge were extracted. Table 2 indicates that the mean ranged from (0.43 – 0.75), and the mean value of total level of knowledge that school teachers had about Autism disorder was (0.58) that lies between (0.5 - 0.7), which suggests that general and special education school teachers had an acceptable approaching to weak level of knowledge about the Autism disorder.

The second aim of this research was to investigate the potential differences in school teachers' knowledge about the Autism with respect to teachers' gender, position, education level, teaching experience, and contact with students with Autism. To address this aim, two processes of analysis were implemented; initially, means, standard deviation, and Results of T-test for the teachers responses depending on (Gender, Position, and Contact with student with Autism) variables were extracted as shown in Table 3.

Table 3: Means, Std., and Results of T-test for the Teachers Responses Depending on (Gender, Position, and Contact with student with Autism) variables

Variables		N	Mean	Std.	T	df	Sig.
Gender	Male	198	.59	.294	.395	389	.693
	Female	193	.57	.254			
position	Special education	179	.83	.128	28.526	389	.000
	General education	212	.37	.177			
contact with students with Autism	Yes	207	.78	.179	24.019	389	.000
	No	184	.36	.169			

As shown in Table 3, the mean scores differ based on the gender (male and female) of the respondent. The male group (n=198) had a mean of $\bar{X}$ = 0.59 and a standard deviation of σ = 0.294; the female group (n=193) had a mean of $\bar{X}$ = 0.57 and a standard deviation of σ = 0.254. A T-test between the means yielded t(389)= 0.395 at p= 0.693, for $p \geq 0.05$. Thus, no significant differences were found in the means among the gender groups. The findings thus indicated that responses were independent of gender variable. For the second variable, differences in the mean scores were found based on the teacher position (special education teacher or general education teacher), as shown in Table 3. The special education teachers group (n=179) had a mean score of $\bar{X}$ = 0.83 and a standard deviation of σ = 0.128;whereas the general education group (212) had a mean score of $\bar{X}$ = 0.37 and a standard deviation of σ = 0.177. A T-test between the means yielded t(398)= 28.526 at p= 0.000, for $p \geq 0.05$. These results indicate a statistically significant difference between the means of the special education teachers and the general education teachers groups, and that the special education teachers group had a higher level of knowledge about the Autism than general education teachers group.

Regarding the third variable, as shown in Table 3, differences in the mean scores were found based on thecontact with students with Autism. Teachers who had a previous contact with students with Autism (n=207) had a mean score of $\bar{X}$ = 0.78 and a standard deviation of σ = 0.179; whereas Teachers who had no previous contact with students with Autism (n=184) had a mean score of $\bar{X}$ = 0.36 and a standard deviation of σ = 0.169. A T-test between the means yielded t(398)= 24.019 at p= 0.000, for $p \geq 0.05$. These results indicate a statistically significant difference between the means of the teachers who had a previous contact with students with Autism and the teachers who had no previous contact with students with Autism. And that the teachers who had a previous contact with students with Autism group had a higher level of knowledge about the Autism than those who had no previous contact with students with Autism.

For the purpose of investigating the potential differences in school teachers' knowledge about the Autism with respect to teachers' education level and teaching experience, another processes of analysis were implemented. Regarding the differences between school teachers' knowledge about the Autism with respect to teachers' education level, as shown in Table 4, differences in the mean scores were found. Teachers who had a Bachelor degree (n=329) had a mean score of $\bar{X}$ = 16.35 and a standard deviation of σ = 0.626; and teachers who had a Higher Diploma degree (n=41) had a mean score of $\bar{X}$ = 20.27 and a standard deviation of σ = 0.702; and teachers who had Master degree (n=21) had a mean score of $\bar{X}$ = 28.38 and a standard deviation of σ = 0.673. An ANOVA test between the means yielded (F=26.957) at p = 0.000, for $p < 0.05$. These results indicate a statistically significant difference between the means of the different education level groups.

Table 4: Means, Std., and Results of Analysis of Variance (ANOVA) for the Teachers Responses Depending on (Education level and Experience) Variables

variable		N	Mean	Std.		Sum of squares	df	Mean squares	F	Sig.
Education	Bachelor	329	16.35	.626	Between G.	3232.5	2	1616.1	26.957	.000
	Diploma	41	20.27	.702	Within G.	23263.8	388	59.95		
	Master	21	28.38	.673	Total	26496.3	390			
Experience	< 5	130	19.26	7.998	Between G.	1145.6	2	572.78	8.767	.000
	5–10	148	17.66	8.146	Within G.	25350.8	388	65.337		
	> 10	113	14.94	8.098	Total	26496.3	390			

In addition, A Scheffé post hoc test was conducted for the comparisons between different education level groups as shown in Table 5. Results indicated that teachers with Higher diploma had higher level of knowledge about Autism in comparison with teachers with Bachelor degree (mean difference = -3.92 at p= 0.010), and teachers with Master degreehad higher level of knowledge about Autism in comparison with teachers with Bachelor degree (mean difference = -12.03 at p= 0.000), and finally, teachers with Master degree had higher level of knowledge about Autism in comparison with teachers with Higher diploma degree (mean difference = 8.11 at p= 0.001).

Table 5: Post Hoc Analysis (Scheffee test) for the Teachers Responses Depending on (Education level, and Experience) Variables

Variables				
Education Level		Mean Difference	Std. Error	Sig
Bachelor	High Diploma	-3.92(*)	1.282	.010
	Master	-12.03(*)	1.743	.000
High Diploma	Bachelor	3.92(*)	1.282	.010
	Master	-8.11(*)	2.078	.001
Master	Bachelor	12.03(*)	1.743	.000
	High Diploma	8.11(*)	2.078	.001
Experience				
Less than 5 years	5–10 years	1.60	.972	.259
	More than 10 years	4.32(*)	1.040	.000
5–10 years	Less than 5 years	-1.60	.972	.259
	More than 10 years	2.72(*)	1.010	.027
More than 10 years	Less than 5 years	-4.32(*)	1.040	.000
	5–10 years	-2.72(*)	1.010	.027

Regarding the differences between school teachers' knowledge about the Autism with respect to teachers' Experience variable, as shown in Table 4, differences in the mean scores were found. Teachers with (< 5) years of experience (n=130) had a mean score of $\bar{X}$ = 19.26and a standard deviation of σ = 7.998; and teachers with (5-10) years of experience (n=148)had a mean score of $\bar{X}$ = 17.66 and a standard deviation of σ = 8.146; and teachers with (>10) years of experience (n=113) had a mean score of $\bar{X}$ = 14.94 and a standard deviation of σ = 8.098. An ANOVA test between the means yielded (F=8.767) at p = 0.000, for p < 0.05. These results indicate a statistically significant difference between the means of the different teachers' Experience level groups. In addition, A Scheffé post hoc test was conducted for the comparisons between different teachers' Experience level groups as shown in Table 5. Results indicated that teachers with (< 5) years of experience had higher level of knowledge about Autism in comparison with teachers with (>10) years of experience (mean difference = 4.32 at p= 0.000), and teachers with (5-10) years of experience had higher level of knowledge about Autism in comparison with teachers with (>10) years of experience (mean difference = 2.72 at p= 0.027).

4. Discussion

The purpose of the study was to find out what school teachers know about Autism. In addition, this study attempted to find out if there any significant differences in school teachers' knowledge about Autism depending on the variables; teacher gender, teacher position, teacher education level, teaching experience, and contact with students with Autism variables. The first research question indicated a lake of knowledge that school teachers had about Autism disorder, as the mean value of total level of knowledge that school teachers had about Autism disorder was (0.58) and lied between (0.5 - 0.7), which suggests that general and special education school teachers had an acceptable approaching to weak level of knowledge about the Autism disorder. taking into consideration the result that special education teachers group had a mean score of $\bar{X} = 0.83$ and the general education group had a mean score of $\bar{X} = 0.37$, leads us to the finding that, specifically, general education teacher had a weak knowledge about Autism, and special education teachers had relatively good level of knowledge about Autism. This result may be related to fact that general school teachers are not prepared well to deal with student with Autism, and a lake of proper in-service inclusion training programs for those teachers.

This result was confirmed by Jordan (2005) study, indicated that little attention has been given to examining the qualities of special and general education teachers who deliver services to these students in inclusive sittings. Moreover, Drucker (1989) claimed that increasing legislative demands placing an emphasis on teacher qualities, raise questions about teachers who serve students with Autism. As a result, it has become increasingly necessary to ensure school teachers are adequately prepared and possess requisite knowledge and skills. To meet the needs of the growing number of students with Autism and to take the necessary action to assist them, school teachers must become aware of Autism. Teachers need to learn about the nature of Autism and about the needs of children with Autism. School teachers, have the capacity to change practice within the school and to affect the instruction of students with Autism. Stone and Rosenbaum (1988) also found that teachers held incorrect beliefs about students with Autism, particularly in the area of cognition, when compared to Autism specialists.

In addition, results of this current study are in agreement with a descriptive study about knowledge, practices employed, and training needs of special education teachers serving students with Autism by Hendricks (2007), in which participants reported a low to intermediate level of knowledge as well as implementation of practices. The most frequently reported was a need for training in social skills development. Numerous occupational characteristics were found to have a relationship with level of knowledge including; area of endorsement, educational level, educational setting, number of students with Autism taught, and student learning characteristics.

Results of the second study objective aimed to find out if there any significant differences in school teachers' knowledge about Autism depending on the variables; teacher gender, teacher position, teacher education level, teaching experience, and contact with students with Autism variables. These results did not indicate any significant differences in teachers' knowledge depending on teachers' gender. With regard to teacher position variable, results indicated that special education teachers group had a higher level of knowledge about Autism than general education teachers group.This finding is in agreement with a study comparing special education teachers to general education teachers in relation to knowledge about Autism by Buell et al. (1999) in which general education teachers expressed more need for inclusion training than special education teachers. Moreover, special education teachers expressed greater confidence in performing inclusion related tasks such as adapting curricula, participating in IEP meetings, and writing behavioral objectives.

Regarding the teacher education level variable, results indicated that teachers with Higher diploma had higher level of knowledge about Autism in comparison with teachers with Bachelor degree, and teachers with Master degree had higher level of knowledge about Autism in comparison with teachers with Bachelor degree, and finally, teachers with Master degree had higher level of knowledge about Autism in comparison with teachers with Higher diploma degree. Teachers with advanced education levels like those with master degree, may have received more advanced courses In the field of education and specifically special education.Teaching in the Master's stage is often more comprehensive and deeper than teaching in the Bachelor stage. Moreover, teaching methods might be different and depend on research and scientific investigation, which increases the level of teachers' knowledge about this topic.This finding is in agreement with (Hendricks, 2007) study that found numerous occupational characteristics (one of them is the educational level) had a relationship with level of knowledge about Autism.

With regard to teaching experience variable, findings indicated that teachers with (< 5) years of experience had higher level of knowledge about Autism than teachers with (>10) years of experience, and teachers with (5-10) years of experience had higher level of knowledge about Autism in comparison with teachers with (>10) years of experience. This result may be due to the fact that people with years of experience between 1-5 years and 6-10 years

are still at the beginning of their work and they still retain the information they received in undergraduate period. Moreover, they may still have motivation for issues relating to their students especially that their students are included in regular schools.

Finally, regarding contact with students with Autism variable, results indicated that teachers who had a previous contact with students with Autism group had a higher level of knowledge about the Autism than those who had no previous contact with students with Autism. It is a logical result, teachers who had previously deal with students with Autism through their learning and training, or that they had received courses or training sessions in the field of Autism, or that they had a self-reading about Autism, it would be necessarily that they have a more advanced level of knowledge than those who do not did exposed to such experiences. This result was confirmed by (Giangreco et al., 1993) study indicating that direct experience in dealing with students with special needs is a critical factor in general educators' efficacy of teaching such a population and with their willingness to include such students in their class. Other studies also confirmed this results indirectly by stressing on the need for teachers to have more training course around how to deal with a student with Autism in an inclusive sittings (Stahmer et al. 2005; Brownell et al. 2003; Whaley, 2002).

5. Conclusion

The information discussed thus far leads to the following conclusions; school teachers have relatively a lake of knowledge about Autism. This finding support the importance of professional development, and training of educators in the nature and needs of students with Autism. Different variables such as teachers' (position, education level, experience, and contact with students with Autism) were found to have a significant direct effect on the level of teachers knowledge about the Autism. School teachers who serve students with Autism in inclusive sittings present with a wide array of characteristics and qualifications. All School teachers, regardless of specific qualifications, should receive training in educational practices needed to effectively serve this group of students.General education teacher programs are sorely in need of more special education classes regarding children with exceptionalities as its focus. More research on the general education teachers' skill and knowledge level of teaching the special needs population as well as additional research on the benefits of special education/general education co-teaching of classes would aid in the development of effective mainstreaming practices.

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